



Serial No.: 10/647829
Confirmation No.: 2942
Applicant: PATEL, Arvind D.
Atty. Ref.: PA-00409US

AMENDMENTS TO THE CLAIMS:

Please amend the claims as indicated below:

1. (Currently Amended) A biodegradable wellbore fluid comprising a blend of synthetic internal olefins and a rheology control agent, wherein the blend of synthetic internal olefins consists of: a first internal olefin fraction (C_{16/18}) having a C₁₆ isomer content of greater than 50% w/w and a C₁₈ isomer content greater than 30% w/w; a second internal olefin fraction (C_{15/18}) having a C₁₅ isomer content of greater than 20% w/w; a C₁₆ isomer content greater than 20%; a C₁₇ isomer content greater than 20%; and a C₁₈ isomer content greater than 15% w/w; and a third internal olefin fraction (C_{15/16}) having a C₁₅ isomer content of greater than 40% w/w and a C₁₆ isomer content greater than 40% w/w. a first synthetic internal olefin having from 16 to 18 carbon atoms (C₁₆₋₁₈ IO), a second synthetic internal olefin having between 15 to 18 carbon atoms (C₁₅₋₁₈ IO), and a third synthetic internal olefin having 15 to 16 carbon atoms (C₁₅₋₁₆ IO).
2. (Currently Amended) The wellbore fluid of claim 1 wherein the first internal olefin fraction is present in a range of about 40 to about 60 percent by weight of the wellbore fluid and wherein the second internal olefin fraction is present in range of about 15 to about 40 percent by weight of the wellbore fluid and wherein the third olefin fraction is present in range of about 10 to about 30 percent by weight of the wellbore fluid.
3. (Original) The wellbore fluid of claim 1 further comprising a C₁₆ alpha olefin (C₁₆ AO).
4. (Original) The wellbore fluid of claim 3 wherein the C₁₆ alpha olefin (C₁₆ AO) is present in the range of about 10 to about 20 percent by weight of the wellbore fluid.
5. (Original) The wellbore fluid of claim 1 further comprising a non-oleaginous phase.
6. (Original) The wellbore fluid of claim 5 wherein said non-oleaginous phase comprises from about 1% to about 70% by volume of said fluid.



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7. (Original) The fluid of claim 6 wherein said non-oleaginous phase is selected from the group consisting of fresh water, seawater, a brine containing organic or inorganic dissolved salts, a liquid containing water-miscible organic compounds, and combinations thereof.

8. (Original) The wellbore fluid of claim 1 further comprising a weighting agent, wherein the weighting agent is selected from the group consisting of calcium carbonate, dolomite, siderite, barite, celestite, iron oxides, manganese oxides, ulexite, carnalite, sodium chloride and combinations thereof.

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Currently Amended) A method of formulating a wellbore fluid, the method comprising blending a mixture of synthetic internal olefin fractions and a rheology control agent, wherein the blend of synthetic internal olefin fractions consists of: a first internal olefin fraction ($C_{16/18}$) having a C_{16} isomer content of greater than 50% w/w and a C_{18} isomer content greater than 30% w/w; a second internal olefin fraction ($C_{15/18}$) having a C_{15} isomer content of greater than 20% w/w; a C_{16} isomer content greater than 20%; a C_{17} isomer content greater than 20%; and a C_{18} isomer content greater than 15% w/w; and a third internal olefin fraction ($C_{15/16}$) having a C_{15} isomer content of greater than 40% w/w and a C_{16} isomer content greater than 40% w/w., the mixture of the three olefin fractions forming the continuous phase of said wellbore fluid; mixing said continuous phase with a discontinuous phase comprising a non-oleaginous liquid; and,



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adjusting the density of the well bore fluid by adding a weighting agent, wherein the weighting agent is selected from the group consisting of calcium carbonate, dolomite, siderite, barite, celestite, iron oxides, manganese oxides, ulexite, carnalite, sodium chloride and combinations thereof.

14. (Currently Amended) The method of claim 13 further comprising blending an alpha olefin having 16 carbon atoms (C_{16} -AO) with the continuous phase of said wellbore fluid.

15. (Currently Amended) A method of drilling a well comprising, attaching a cutting bit to a length of drill pipe, rotating said cutting bit, removing cuttings from around said bit with a drilling fluid wherein the drilling fluid is a biodegradable wellbore fluid which comprises a first synthetic internal olefin having from 16 to 18 carbon atoms (C_{16-18} -IO), a second synthetic internal olefin having between 15 to 18 carbon atoms (C_{15-18} -IO), and a third synthetic internal olefin having 15 to 16 carbon atoms (C_{15-16} -IO), a mixture of synthetic internal olefin fractions and a rheology control agent, wherein the blend of synthetic internal olefin fractions consists of: a first internal olefin fraction ($C_{16/18}$) having a C_{16} isomer content of greater than 50% w/w and a C_{18} isomer content greater than 30% w/w; a second internal olefin fraction ($C_{15/18}$) having a C_{15} isomer content of greater than 20% w/w; a C_{16} isomer content greater than 20%; a C_{17} isomer content greater than 20%; and a C_{18} isomer content greater than 15% w/w; and a third internal olefin fraction ($C_{15/16}$) having a C_{15} isomer content of greater than 40% w/w and a C_{16} isomer content greater than 40% w/w, the combination of the three olefin fractions forming the continuous phase of said wellbore fluid.

16. (Currently Amended) The method of claim 15, wherein the well bore fluid further comprises an alpha olefin having 16 carbon atoms (C_{16} -AO) with the continuous phase of said wellbore fluid.

17. (Currently Amended) The method of claim 15, wherein the wellbore fluid is further comprised of a discontinuous phase comprising a non-oleaginous liquid; and,



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a weighting agent, wherein the weighting agent is selected from the group consisting of calcium carbonate, dolomite, siderite, barite, celestite, iron oxides, manganese oxides, ulexite, carnalite, sodium chloride and combinations thereof. the C₁₆-IO internal olefin has a C₁₆ isomer content of greater than 50% w/w and a C₁₈ isomer content greater than 30% w/w; wherein the C₁₅-IO has a C₁₅ isomer content of greater than 20% w/w; a C₁₆ isomer content greater than 20%; a C₁₇ isomer content greater than 20%; and a C₁₈ isomer content greater than 15% w/w; and wherein the C₁₅-IO has a C₁₅ isomer content of greater than 40% w/w and a C₁₆ isomer content greater than 40% w/w.

18. (Original) The method of claim 16, wherein the C₁₆ alpha olefin has a C₁₆ isomer content of greater than 90% w/w.